

RADIODISCUS HUBRICHTI (PULMONATA: ENDODONTIDAE)
NEW SPECIES FROM THE OLYMPIC PENINSULA, WASHINGTON¹

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Henderson (1929, 1936), in his rather extensive collecting, failed to disclose the presence of *Radiodiscus* in the state of Washington, as have all subsequent collectors. The generic name was proposed by Pilsbry and Ferriss (1906) to include a small number of small to minute endodontid snails that ranged from western Oregon to Arizona southward to Terre del Fuego in South America; *R. millicostatus*, from the Huachuca Mountains of Arizona, was presented as the genotype. The principal distinguishing feature of the genus are the embryonic whorls which are minutely engraved with spiral sculpture, whereas the remainder of the shell is radially costulate.

H. B. Baker's (1930) discovery of a new species, *R. abietum*, in Idaho extended the range of the genus to that state. Pilsbry (1948) summarized the published information on the two U.S. species, and Brunson and Russell (1967) reported the last-named species from 10 Montana localities, and that is essentially the present state of knowledge of the genus as far as North American species are concerned.

This paper extends that knowledge somewhat, and describes a new species, named in honor of my old friend, Leslie Hubricht, who has spent nearly his entire adult life in the study of terrestrial gastropods.

***Radiodiscus hubrichti* new species**

Figs. 1a, b, c

Description of holotype (U.S. National Museum, USNM 709470): the palehorn colored, nearly transparent shell is minute, 1.59 mm in diameter, 0.87 mm in height, with three whorls; the last whorl is slightly more than two times

wider than the next to the last (0.52mm/0.25mm), and the wide-open umbilicus, exhibiting all volutions to the apex, measures 0.51 mm and goes into the shell diameter three times; the umbilicus is paralleled by a series of minute, spiral sculptures. The spire is slightly everted, its whorls being separated by a moderately channelled suture; first one and one-half whorls marked by minute spiral sculpture, the rest being radially costulate; the costae are rather widely-spaced and extend for only about two-thirds the way on to the base, which is otherwise slightly granular in appearance. The aperture is oblique, and slightly descending. The animal is dead white with the exception of a small black blotch over the lung,



FIG. 1. *Radiodiscus hubrichti*, new species. a, apical view; b, apertural view; c, umbilical view. Scale line equals 1 mm.

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and the foot is very narrow and pigmentless. The following measurements were secured from the several paratypes.

Locality 1: old glacial valley of Sams River, Kloochman Rock Quadrangle, S 34, R 10 W, T 24 N, Olympic Peninsula, Washington. Beneath the canopy of a bigleaf maple in piles of leaf litter and licorice ferns. 7 July 1969. Eastern Kentucky University (EKU 10904).

Locality 2: Mount Storm King, 4,000 feet mean sea level, Joyce Quadrangle, R 8 W, T 29 N, Olympic National Park, Washington, in litter of buckthorn and western hemlock. 5 July 1969. Chicago Field Museum of Natural History (FMNH 175456).

Locality 3: three miles up trail from Hoh Rain Forest ranger station, Mount Tom Quadrangle, S 4, R W, T 27 N, 960 feet mean sea level, in bigleaf maple litter, Olympic National Park, Washington. 11 July 1969. Delaware Museum of Natural History (DMNH 75901).

Locality 4: **Type Locality:** Spruce Mountain Quadrangle, northwest corner of S 30, R 12 W, T 27 N, 400 feet mean sea level, in bigleaf maple litter, Olympic National Park, Washington. 12 July 1969. Holotype and three additional specimens (EKU 10847 and 10954).

Locality 5: mouth of Duckabush River, U.S. Highway 101, Olympic Peninsula, Washington. 18 July 1969. (EKU 10949).

Locality 6: ten miles southwest of Sequim on Palo Alto Road, Tyler Peak Quadrangle, S 30, R 3 W, T 29 N, 1106 feet mean sea level, in red alder and fern litter, Olympic Peninsula, Washington. 15 July 1969. One specimen (EKU 10953).

Locality 7: La Poel Point, Lake Cresecent Quadrangle, S 32, R 9 W, T 30 N, 580 feet mean sea level, in salal litter, Olympic National

Park, Washington. 12 July 1969. Two specimens (EKU 10952).

REMARKS

Radiodiscus hubrichti appears to be most closely related to *R. millicostatus*, from which it differs in being pale-horn-colored rather than chestnut-brown, in having a pale first whorl rather than a bluish white one, in being somewhat smaller, and in having fewer whorls, less deeply channelled sutures. Also, the animal is much paler, and the lung is not mottled.

The new species differs from *R. abietum* in being much smaller, in having a nearly transparent epidermis rather than an opaque one, in color (*R. abietum* is light chocolate-brown), in having fewer whorls, in having 1½ embryonic whorls rather than 2 to 2¼, and in having a much larger umbilicus.

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Locality	Diameter	Height	Umbilicus Width	Whorls	Width Last Whorl	Width Spire
1	1.6 mm		0.50 mm	3 ¹ / ₃		
2	1.5	0.90	0.50	2 ³ / ₄		
3	1.5	0.70	0.60	3 ³ / ₄		
4	1.2	0.46		2 ¹ / ₄		
4	1.7	0.70		3 ¹ / ₅		
5	1.39	0.79	0.31	2 ² / ₃	0.46	0.75
5	1.26	0.70	0.35	2 ³ / ₄	0.38	0.70
4	1.50	0.98	0.36	3	0.43	0.86
6	1.60	0.91	0.42	3	0.50	0.84
7	1.68	0.95	0.47	3 ³ / ₄	0.50	0.93
7	1.60	0.96	0.47	2 ³ / ₄	0.43	0.89